

### **FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION**



All sections must be addressed, or the application will be considered invalid

#### I. **APPLICANT INFORMATION**

A.	Applicant Name: Ryan Kreiner- FWP Nat	ive Species Biologist				
	Mailing Address: 730 ½ N. Montana					
	City: Dillon	State: Montana Zip:	59725			
	Telephone: (406) 531-5861	E-mail: <u>rkreiner@mt.g</u>	<u>ov</u>			
В.	Contact Person (if different than applicant):	Same as applicant				
	Address:					
	City:					
	Telephone:	E-mail:				
C.	Landowner and/or Lessee Name (if different than applicant):  The Nature	ıre Conservancy – Nathan k	Korb			
	Mailing Address: 32 S. Ewing St Suite 201					
	City: Helena	State: MT Zip:	59601			
	Telephone: 406-925-1144	E-mail: nkorb@tnc.org	1			
PR	OJECT INFORMATION					
A.	Project Name: Long Creek Aquatic Habitat	t Enhancement				
	River, stream, or lake: Long Creek, Cente	nnial Valley				
	Location: Township: 13S R	ange: 4W	Section: 28			
	Latitude: 44.67 L	ongitude: 112.11	within project (decimal degrees)			
	County: Beaverhead County					
В.	Purpose of Project:					

II.

The purpose of the Long Creek Aquatic Habitat Enhancement Project (Project) is to improve the extent and condition of important habitats for Arctic Grayling on the Long Creek property owned by The Nature Conservancy. Habitat enhancement will increase the extent of suitable spawning habitats and the number of pools specifically for grayling life history needs. Channel realignment and bank treatments will reduce thermal loading during low-flow periods.

C. Brief Project Description (attach additional information to end of application):

FWP and its partners in the Centennial Valley have a stated recovery goal of establishing or maintaining viable populations of Arctic grayling in at least two tributaries above and below upper Red Rock Lake. Currently, Long Creek in the Centennial Valley is the only tributary below upper Red Rock Lake with a viable population of Arctic grayling and the population is limited to only a few miles of stream because of unsuitable habitat upstream and downstream. The Long Creek population is small and geographically distanced from other populations. The property is protected in perpetuity with a USFWS conservation easement.

Historical land use on Long Creek has resulted in degraded aquatic habitat and a truncated Arctic grayling population. Based on intensive geomorphic, historical, and hydrologic investigations, our team has identified the causes of degradation to include: loss of beaver, altered flows from water diversion, and past livestock use in the riparian zone. The result has been loss of riparian vegetation, increase in non-native vegetation, channel incision and widening, loss of habitat complexity, and increased erosion and sedimentation. The grayling population that resides in Long Creek is resultantly confined to a relatively short reach upstream of the project area where higher quality riparian and aquatic habitats exist.

In close partnership with FWP and USFWS since 2010, The Nature Conservancy has implemented a variety of ecologically guided management practices on their four-mile reach of Long Creek in the Centennial Valley. These activities include extensive willow planting, mature willow transplants, barrier removal, irrigation infrastructure improvements, instream flow leases to FWP, and floodplain reconnection. The result of these activities include increased extent and condition of riparian woody vegetation, improved stream function and floodplain connectivity, improved aquatic organism passage, reduced erosion and sedimentation, and more late-season instream flows. However, more work is needed to improve the important aquatic habitats that grayling depend on, specifically an appropriately sized channel with clean gravel riffles and pools with overhanging vegetation.

Past projects have directed effort at establishing new riparian vegetation such as willows. These efforts have been met with some success but are labor intensive and slow to develop. Currently, an opportunity exists to move Long Creek from a portion of degraded channel into a historic stream channel with a stronger riparian vegetation community. Specifically, a new channel will be reactivated in a historic riparian/stream corridor where mature willows and sedge communities are the dominant vegetation type (Figure 1). The superior riparian vegetation in the new channel will provide shade and cover and help reduce stream temperatures. This new channel will improve instream habitat quality for this section of Long Creek through the development of pool habitat and more suitable spawning habitat. The improved riparian vegetation will decrease width/depth ratios which will help maintain adequate water depth and temperature during low-flow periods. The current, existing channel will be modified such that it is activated during runoff events and will provide storage of water in the floodplain for summer baseflows in the new, activated channel of Long Creek. Overall, Arctic grayling habitat will be enhanced on this section of Long Creek, while increasing the overall riparian footprint of Long Creek, which benefits the fishery and wildlife.

D.	Length of stream or size of lake that will be treated (project extent):	3000 feet	
	Length/size of impact, if larger than project extent (e.g. stream miles	opened):	

Grant Request (Dollars): \$ 27,750

Matching Dollars: \$ 37,820

Matching In-Kind Services:\* \$ 4,000

\*salaries of government employees are not considered matching contributions

Total Project Cost: \$ 69,570

F. **Attach** itemized (line item) budget – see budget template

Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire* (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. **Attach** land management & maintenance plans that will ensure protection of the reclaimed area.

#### III. PROJECT BENEFITS (attach additional information to end of application):

A. What species of fish will benefit from this project?

The Project is specifically designed to meet critical habitat needs for Arctic Grayling, though other species may benefit.

B. How will the project protect or enhance wild fish habitat?

The Project will directly address limiting factors for the fishery in Long Creek: spawning gravel and pool habitats for Arctic grayling. The creation of long-lasting habitats in a stream that currently has low habitat diversity will improve conditions for grayling and other aquatic species.

C. Will the project improve fish populations and/or fishing? To what extent?

The small, isolated native population of grayling in Long Creek is limited by suitable habitats for various life history stages. Habitat enhancement will benefit the local population and promote resilience of Centennial grayling population. Benefits can be expected throughout Long Creek and potentially into Red Rock River and Lima Reservoir.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?

The Nature Conservancy allows public access with permission. However, Long Creek has not been a frequently fished stream for decades. With improved habitat and more robust populations, there may be a public fishing benefit in the future.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

The Nature Conservancy's commitment to maintaining and improving habitat on Long Creek over the past decade demonstrates their ability to meet this commitment in the coming decades. They have approached restoration in collaboration with FWP and USFWS proceeding carefully, iteratively, and adaptively, using strong science and partnerships to develop objectives, assess success and refine strategies.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?

Based on intensive geomorphic, historical, and hydrologic investigations, our team has identified the causes of degradation to include: loss of beaver, altered flows from water diversion, and past livestock use in the riparian zone. The result has been loss of riparian vegetation, increase in non-native vegetation, channel incision and widening, loss of habitat complexity, and increased erosion and sedimentation.

G. What public benefits will be realized from this project?

The project will promote a more resilient fishery long-term, as well as improved habitat for beaver, moose, bear, birds, and other wildlife that use the willow riparian areas. These benefits extend beyond the project area and are a significant part of meeting conservation goals for grayling and wildlife among private and public partners in the Centennial Valley.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

The project will not affect water or property rights of adjacent landowners.

I. Will the project result in the development of commercial recreational use on the site? (explain):

The project will not result in any commercial recreational use of the site.

J. Is this project associated with the reclamation of past mining activity?

No.

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

#### IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

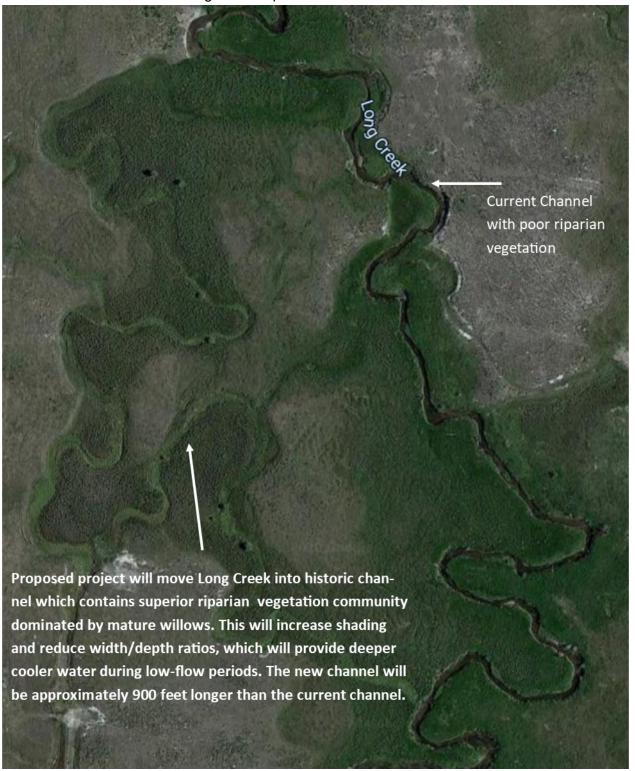
Submittal: Applications must be signed and received before December 1 and June 1 of each year to be considered for the subsequent funding period. Late or incomplete applications will be rejected.

Mail to: Montana FWP Email: Michelle McGree
Fish Management Bureau
PO Box 200701 Email: Michelle McGree
mmcgree@mt.gov
(electronic submissions must be signed)

Helena, MT 59620-0701 For files over 10MB, use <a href="https://transfer.mt.gov">https://transfer.mt.gov</a>

Applications may be rejected if this form is modified.

Figure 1. Aerial photo of proposed Long Creek Aquatic Habitat Enhancement Project.



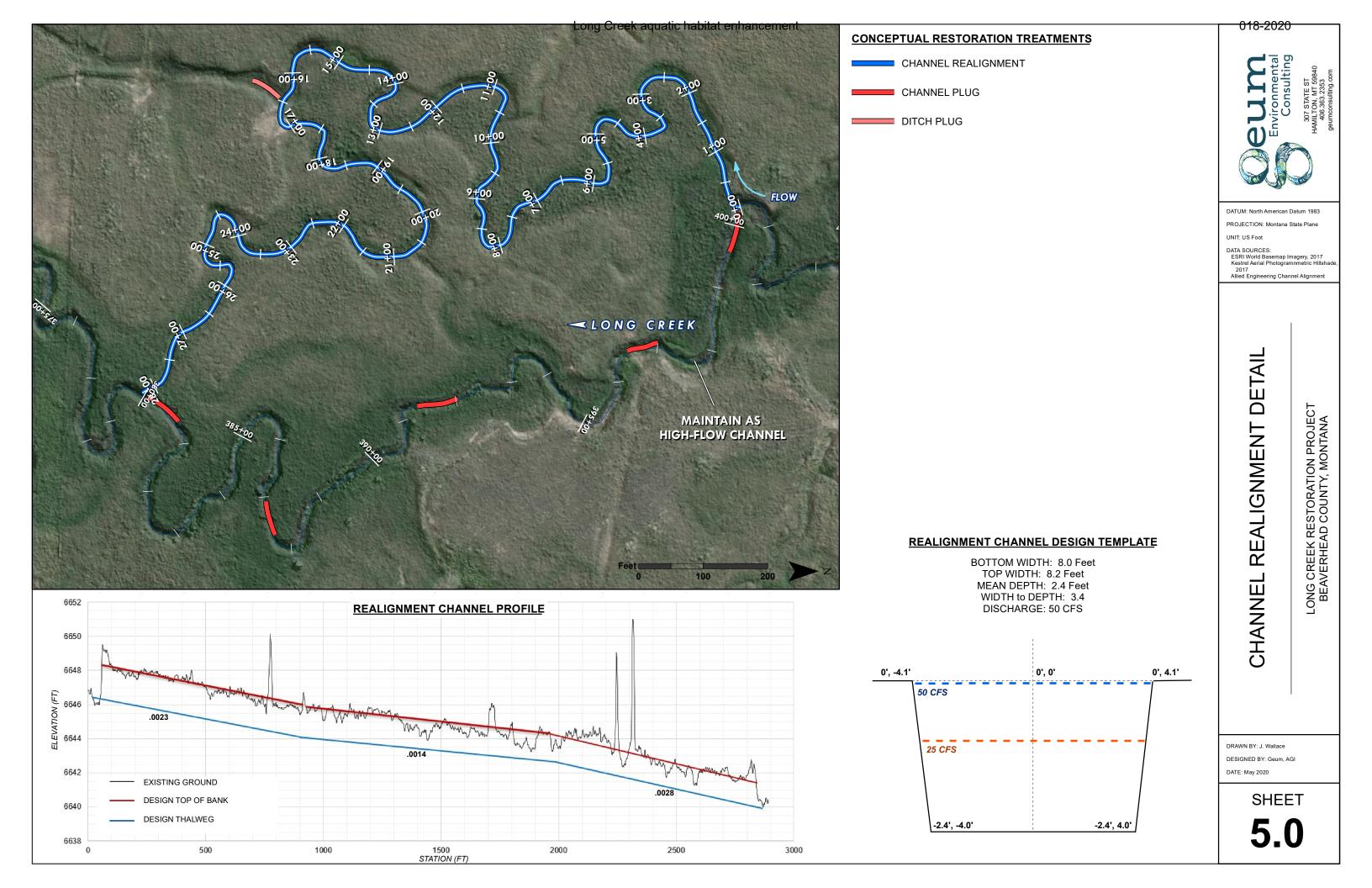
# BUDGET TEMPLATES SOFFF ARE ENTER THE BUDGET TEMPLATES SOFFF AREA (Revised 5/31/2020)

						CONTRIBU	JTIONS	
	NUMBER OF				FUTURE FISHERIES			
WORK ITEMS (ITEMIZE BY CATEGORY)	UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	REQUEST	IN-KIND SERVICES	IN-KIND CASH	TOTAL
Personnel								
Site survey / alternatives analysis	1	lump	\$7,440.00	\$ 7,440.00			7,440.00	\$ 7,440.00
Design and Permitting	0.2	20% construction	\$43,462.00	\$ 8,692.40			8,692.40	\$ 8,692.40
Wetland Delineation	25	hours	\$90.00	\$ 2,250.00			2,250.00	\$ 2,250.00
Oversight	0.1	10% construction	\$43,462.00	\$ 4,346.20	4,346.20			\$ 4,346.20
Travel								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
Construction Materials								
Gravel and cobble (screen/import)	150	cubic yard	\$20.00	\$ 3,000.00	3,000.00			\$ 3,000.00
Willow cuttings	3000	per willow	\$0.50	\$ 1,500.00		1,500.00		\$ 1,500.00
Wood and brush	1	lump	\$2,500.00	\$ 2,500.00		2,500.00		\$ 2,500.00
				\$ -				\$ -
Equipment								
Channel excavation/shaping	2820	linear feet	\$10.00	\$ 28,200.00	14,100.00		14,100.00	\$ 28,200.00
Woody brush matrix banks	564	linear feet	\$8.00	\$ 4,512.00	2,256.00		2,256.00	\$ 4,512.00
Main channel plug	100	cubic yard	\$2.50	\$ 250.00	125.00		125.00	\$ 250.00
Channel and ditch plugs	5	each	\$200.00	\$ 1,000.00	500.00		500.00	\$ 1,000.00
Abandoned channel reclamation	1	lump	\$2,500.00	\$ 2,500.00	1,250.00		1,250.00	\$ 2,500.00
Mobilization								
All Equipment	0.05	5% construction	\$43,462.00	\$ 2,173.10	2,173.10			\$ 2,173.10
				\$ -				\$ -
			TOTALS	\$ 68,363.70	\$ 27,750.30	\$ 4,000.00	\$ 36,613.40	\$ 68,363.70

<sup>\*</sup>Units = feet, hours, inches, lump sum, etc.

## **MATCHING CONTRIBUTIONS**

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL
FWP/FWS CCAA		\$ 26,923.40	\$ 26,923.40
The Nature Conservancy (all costs incurred prior to grant agreement)	\$ 4,000.00	\$ 9,690.00	\$ 13,690.00
	\$ -	\$ -	\$ -
	\$ 4,000.00	\$ 36,613.40	40,613.40



#### FWP.MT.GOV



THE **OUTSIDE** IS IN US ALL.

Region 3 Fisheries

730 N. Montana, Dillon, MT 59725

406-683-9310

May 29, 2020

Montana Fish, Wildlife & Parks Future Fisheries Improvement Program 1420 E. Sixth Ave. P.O. Box 200701 Helena, MT 59620-0701

To whom it may concern:

Montana Fish, Wildlife & Parks (FWP) is in full support of the Long Creek Aquatic Habitat Enhancement Project recently submitted for partial funding by the Future Fisheries Improvement Program. Long Creek currently contains a population of resident Arctic grayling but much of the riparian, and resultantly instream habitat, was historically damaged through improper grazing and management. The proposed project would complement previous restoration work by increasing habitats that grayling depend on including riffles with suitable spawning gravels and deep pools with overhanging vegetation.

The Centennial Valley Arctic Grayling Recovery Team, which includes all wildlife and land management agencies in the valley, has a stated recovery goal of "Establishing or maintaining viable populations of Arctic grayling in at least two tributaries above Upper Red Rock Lake and two tributaries below Upper Red Rock Lake." Currently, Long Creek is the only tributary in the Centennial Valley below Red Rock Lake with a viable population of Arctic grayling. The grayling population currently occupies only a few miles of stream and is bordered on both the upper and lower end by unsuitable habitat. The proposed project will increase the length of stream occupied by grayling by extending suitable habitat farther downstream.

The Centennial Valley Arctic Grayling Recovery Team has committed extensive time and resources into identifying limiting factors of individual grayling populations within the valley. In Long Creek, limiting factors include suitable spawning habitat, warm stream temperatures, and water quantity. This project will address spawning habitat and stream temperature, while partners continue to address water quantity in separate projects. By re-activating historic channels the project will provide improved shade and bank stability, adjust slope and elevation of the bank and stream channel to appropriately support aquatic life during low-flow periods, and access riparian corridors that currently contain more intact willow riparian plant communities.

Thank you for your consideration!

Sincerely,

Beaverhead-Ruby Fisheries Program Manager



The Nature Conservancy of Montana
32 South Ewing Street
Helena, MT 59601

Tel (406) 443-0303 Fax (406) 443-8311

nature.org

May 29, 2020

Michelle McGree Fish Management Bureau PO Box 200701 Helena, MT 59620-0701

Re: Long Creek Aquatic Habitat Enhancement Project for Future Fisheries Improvement Program

Dear Michelle,

The Nature Conservancy supports the Long Creek Aquatic Habitat Enhancement Project (Project) on our property in the Centennial Valley. The project was developed through close collaboration with Montana Fish, Wildlife & Parks and the US Fish and Wildlife Service. We have been committed to recovery of Arctic grayling since acquiring the Long Creek property in 2009 and have implemented several projects that have improved stream and riparian habitats for grayling. Having enrolled in the Centennial Valley CCAA program, enhancing aquatic habitat is the most important objective for grayling recovery on our property.

In addition to our commitment to maintaining the long-term benefits of the project over the next 20 years, The Nature Conservancy will contribute to the project in the following ways: on-the-ground geomorphic assessment of habitat enhancement opportunities, alternatives analysis of costs and benefits of those opportunities, wetland delineation for Army Corps of Engineer permitting, supply of brush material for bank treatments, and willow planting after the project is complete. We will incur costs estimated at \$9,690 for the assessment, alternatives analysis, and wetland delineation before July 15, 2020. We will contribute live willow material for brush matrixes at the time of construction, and we will plant 3000 willow stakes after the project completion, at an estimated in-kind service value of \$4,000.

Thank you for considering the Long Creek Aquatic Habitat Enhancement Project proposal for Future Fisheries funding. We are excited to partner with FWP and USFWS on Arctic grayling recovery in the Centennial Valley.

Sincerely,

Nathan Korb